REMARKS

In further support of the claims presented, Applicants submit the following remarks:

I. Claim Rejections Under 35 U.S.C. § 103(a)

Obviousness

The Applicants note that with regard to a rejection 35 U.S.C. § 103(a), the Examiner bears an obligation to go forward and produce reasoning and evidence in support of obviousness is clearly defined at M.P.E.P. §2142:

> The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

M.P.E.P. §2143 sets out the three basic criteria that a patent examiner must satisfy to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a):

1. some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;

2. a reasonable expectation of success; and

3. the teaching or suggestion of all the claim limitations by the prior art reference (or references when combined).

It follows that in the absence of such a *prima facie* showing of obviousness by the Examiner (assuming there are no objections or other grounds for rejection), an applicant is entitled to grant of a patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443 (Fed. Cir. 1992). Thus, in order to support an obviousness rejection under 35 U.S.C. § 103(a), the Examiner is obliged to produce evidence compelling a conclusion that each of the three aforementioned basic criteria has been met.

Itoh, et al.

Claims 1-7, 9-19 and 22-25 were rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over Itoh et al., "Itoh" (U.S. Patent No. 6,459,224) in view of the Applicant's Prior Art, Fig. 3 (hereinafter "Prior Art").

Regarding claims 1 and 14, the Examiner argued that Itoh shows in FIGS. 1, 2 and 4-6 the following elements of Applicant's invention: a) a plurality of emitter-receiver pairs (citing col. 12, lines 3-13 of Itoh) for detecting light that was interrupted by an object moving on a conveyor (citing reference numeral 2b of Itoh) when the object enters sensing zones on the conveyor, wherein each of the sensing zones is associated with one of the plurality of emitter-receiver pairs; and b) a signal conditioning module (citing reference numeral 10 of FIG. 2 of Itoh) receiving the detected light signals from each of the plurality of emitter-receiver pairs (citing SB(13), S_{LS}(14L), S_{RS}(14R), S_{LL}(15L), S_{RL}(15R) of Itoh), wherein the signal conditioning module multiplexes (citing reference numeral 23 in FIG. 2 of Itoh) the received signal to individually access each of the plurality of emitter-receiver pairs and conditions the detected light signals to provide valid output signals, which are utilized to provide controlling information necessary to route the object to a proper location and prevent damage to the object from other objects as the object is being transported upon the conveyor (citing col. 2, lines 27-36 of Itoh).

The Applicant respectfully disagrees with this assessment. The Applicant notes that reference numeral 10 of FIG. 2 of Itoh does not refer to a signal conditioning module but instead refers, as indicated at col. 13, lines 7-23 of Itoh, to a control circuit 10 composed of a logic circuit, a drive circuit 11, control signals from the control circuit 10, and so forth, but does not teach signal conditioning. The Examiner has not satisfactorily explained how control circuit 10 functions as a signal conditioning module.

The Examiner admitted that Itoh differs from the claimed invention in that the device of Itoh utilizes a light barrier type sensing scheme for detecting the object, whereas the claimed invention utilizes a reflective type sensing scheme for detecting the object. The Examiner argued, however, that the use of a reflective type sensor for detecting an object is well known in the art as shown in the Prior Art, and that it would have been obvious to one of ordinary skill in the art to replace the light barrier type sensor of Itoh with the reflective type sensor in Prior Art in view of increasing flexibility in positioning sensors in the conveyor system of Itoh.

The Examiner admitted that Itoh does not specifically mention the use of a multiplexer, but argued that it appears that the switching IC (citing reference numeral 23 in FIG. 2 of Itoh), which comprises 10 input terminals and 3 output terminals is inherently a multiplexer. The Examiner further argued that if not inherent, it would have been obvious to one of ordinary skill in the art to utilize a multiplexer in the control circuit of Itoh in view of the desire to accomplish the effective performance for processing the signals from the photoelectric sensors of Itoh.

The Applicants respectfully disagree with this assessment. The Examiner admitted that Itoh lacks both a reflective type sensing scheme for detecting objects and the use of a multiplexer. The Applicant submits that the Examiner's argument that the use of a reflective type sensor for detecting an object is well known in the Prior Art fails under the three prongs of the aforementioned test under M.P.E.P. §2143.

First, The Examiner has not provided an explanation explaining why and how a reasonable expectation of success of achieving <u>all</u> of the claim limitations of Applicants claimed invention would be result from combining Itoh with the prior art, because the Prior Art of FIG. 3 can only be practiced in the context of an ASIC

configuration, and Applicants' invention is practiced utilizing a software controlled configuration, which is a fundamentally different configuration than that presented by either the ASIC configuration of the FIG. 3 prior art drawing and/or the light barrier type sensing scheme of Itoh.

Second, one skilled in the art would not have been motivated to combine the ASIC configuration of FIG. 3 with Itoh to achieve a software controlled implementation because neither the ASIC configuration of Prior Art FIG. 3 and/or Itoh teach a software controlled reflective type sensing. As Applicant explains in the background section of the specification, "...a need exists for a method and system, which would reduce the cost of complexity of the sensing functions by replacing conventional photoelectric sensor with specialized optical sensing devices that are controlled largely by software executing on a distributed logic controlled device." Neither Itoh nor Prior Art FIG. 3 achieve such a result. Applicant's invention, on the other hand, does achieve such a result.

Third, the Examiner has not established the teaching or suggestion of <u>all</u> the claim limitations of Applicant's claims by the Itoh and FIG. 3 Prior Art drawing when combined. The Examiner's admission that neither Itoh nor FIG. 3 Prior Art specifically teach a multiplexer is evidence of the Examiner's failure to establish the teaching or suggestion of all of the claims limitations of Applicant's invention by Itoh and/or the FIG. 3 Prior Art drawing.

The Examiner admitted that Itoh does not specifically mention the use of a multiplexer, but argued that it appears that the switching IC (citing reference numeral 23 in FIG. 2 of Itoh), which comprises 10 input terminals and 3 output terminals is inherently a multiplexer. The Examiner further argued that if not inherent, it would have been obvious to one of ordinary skill in the art to utilize a multiplexer in the control circuit of Itoh in view of the desire to accomplish the effective performance for processing the signals from the photoelectric sensors of Itoh. The Applicants respectfully disagree with this assessment.

The Examiner has not successfully established that the switching IC of reference numeral 23 in FIG. 2 of Itoh, including the 10 input terminals and 3 output terminals is inherently a multiplexer. The "Dictionary of Electronics" by E.C. Young, Penguin Books, Copyright, Market House Books, Ltd., 1979, 1988, defines a "multiplexer" and a "multiplex operation" as "the simultaneous transmission of several signals along a single path without any loss of identity of an individual signal...the various signals are input to a multiplexer that is used to allocate a transmission path to the input according to a particular parameter of the signal."

The switching circuit 23 of Itoh, on the other hand, as indicated at col. 14, lines 21, 46, of Itoh, is used for choosing which of right and left sensors signals can be used as a signal on the upstream side or a signal on the downstream side on the basis of the CW/CCW, and so forth. Thus, the simultaneous transmission of several signals along a single path without any loss of identity of an individual signal does not occur via the switching circuit 23 of Itoh because in fact, multiple paths are present (i.e. right or left sensor signals, upstream and downstream sides of the signal, CW/CCW, etc.), thereby leading to the loss of the identity of the original signal. Thus, the switching circuit 23 of Itoh is not inherently a multiplexer.

Applicants additionally note that the use of a multiplexer is implemented because the prior art, including Itoh and the FIG. 3 Prior Art drawing lack the ability to permit multiple sensors to share common interface circuitry within a distributed controller configuration. Applicant's specification beginning at Page 10, line 28 indicates that the following:

"The present invention also permits multiple sensors to share common interface circuitry within the distributed controller. One implementation of this is multiplexing, wherein each optical emitter can be energized in time sequence, and each corresponding optical detector may be scanned to determine the presence of an object in the same time sequence. This approach makes it possible to create a controller having only one set of electronics, which can be shared amongst a multitude or plurality of emitter/detector pairs. By synchronizing the time sequence, it is possible to minimize false signals from other optical sources."

Such features and advantages could not be obtained by merely modifying the circuit 23 of Itoh and/or the Prior Art FIG. 3 drawing cited by the Examiner, because such a timing sequence in association with common interface circuitry, a distributed controller, and multiplexing is simply not taught by Itoh and/or the Prior Art FIG. 3.

Additionally, the Examiner's argument that it would have been obvious to one of ordinary skill in the art to utilize a multiplexer in the control circuit of Itoh in view of the desire to accomplish the effective performance for processing the signals from the photoelectric sensors of Itoh fails under the three prongs of the aforementioned test under M.P.E.P. §2143. First, because a multiplexer is not taught by either Itoh or the FIG. 3 Prior Art drawing (which shows an ASIC not a multiplexer), no suggestion or motivation is present, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings to result in a multiplexer.

The Examiner has not explained how and why one skilled in the art would actually go about changing switching circuit 23 of Itoh, for example, or the ASIC of the FIG. 3 prior art to implement a multiplexer in the context of a software controlled optical sensor for conveyors. Second, the Examiner has not explained how and why a reasonable expectation of success exists for achieving such a goal (i.e., a multiplexer in the context of a software controlled optical sensor for conveyors) when neither reference (Itoh or the FIG. 3 Prior Art drawing) show, teach or suggest a multiplexer. Third, the Examiner has admitted that neither Itoh nor the FIG. 3 Prior Art drawing teach or show such a multiplexer. Therefore, the Examiner has not established the teaching or suggestion of all the claim limitations including the multiplexer by the prior art reference(s) (or references when combined).

Regarding claims 2, 3, 15, and 16, the Examiner argued that Itoh in view of the Prior Art discloses the limitations therein. The Applicants respectfully disagree

with this assessment. Applicant's claim 2 is directed toward the further step of emitting light, such that the light is reflected by the object and thereafter detected utilizing the plurality of emitter-receiver pairs. Applicant's claim 3 is directed toward the step of arranging the plurality of emitter-receiver pairs to provide control over a sensing distance. Similarly, Applicant's claims 15 indicates each of the plurality of emitter-receiver pairs further comprises a light emitter, and Applicant's claim 16 indicates that each of the plurality of emitter-receiver pairs is arranged to provide control over a sensing distance. The Examiner has not cited any portion of Itoh or the FIG. 3 Prior Art drawing, which indicates sensing distance, a control over a sensing distance, an arrangement of emitter-receiver pairs for providing control over such a distance, and/or a step in which light is emitted and reflected by the detected object. Which portion of Itoh constitutes such a light emitter and which portion of Itoh shows such a reflection?

Instead, the Examiner has taken the references out of context in an attempt to argue that the Itoh and Prior Art FIG. 3 drawing references teach all of the elements of Applicant's claims 2, 3, 15, and 16. The Applicants remind the Examiner that the language of the references may not taken be out of context and combined them without motivation, in effect producing the words of the claims (and sometimes, not even the words or concepts of the claims), without their meaning or context. The resultant combination would not yield the invention as claimed.

The claims are rejected under 35 U.S.C. §103(a) and no showing has been made to provide the motivation as to why one of skill in the art would be motivated to make such a combination, and further fails to provide the teachings necessary to fill the gaps in these references in order to yield the invention as claimed. The rejections under 35 U.S.C. §103(a) have provided no more motivation than to simply point out the individual words of the Applicant's claims among the references, but without the reason and result as provided in the Applicant's claims and specification, and without reason as to why and how the references could provide the Applicant's invention as claimed. Hindsight cannot be the basis for

motivation, which is not sufficient to meet the burden of sustaining a 35 U.S.C. §103(a) rejection.

Thus, claims 2, 3, 15, and 16 of the present invention are not taught or suggested by Itoh and/or the Prior Art. Combining these references fails to teach or yield the invention as claimed. The combination of these references fails to teach or suggest all the elements of the claims. Further, one of skill in the art would not be motivated to make such a combination. Therefore, the present invention is not obvious in light of any combination of Itoh and/or the Prior Art. Withdrawal of the §103(a) rejection to claims 2, 3, 15, and 16 is therefore respectfully requested.

Regarding claims 4, 5, 17 and 18, the Examiner argued that the specific distance measured by the device of Itoh in view of the Prior Art would have been obvious to one of ordinary skill in the art in view of design requirements, the specific lens used and the desired performance, etc. The Applicant respectfully disagrees with this assessment. Applicant's claim 4, which is dependent upon Applicant's claim 3, indicates that the sensing distance comprises a maximum sensing distance. Applicant's claim 5, which is also dependent upon Applicant's claim 3, indicates that the sensing distance comprises a minimum sensing distance. Similarly, Applicant's claim 17, which is dependent upon claim 16, indicates that the sensing distance comprises a maximum sensing distance. Applicant's claim 18, which is also dependent upon claim 16, indicates that the sensing distance comprises a minimum sensing distance. Applicant notes that the Examiner has not cited any portions of Itoh and/or the Prior Art, which teaches minimum and maximum sensing distance.

Instead, the Examiner has taken the references out of context in an attempt to argue that such the Itoh and Prior Art FIG. 3 drawing references teach all of the elements of Applicant's claims 4, 5, 17 and 18. The Applicants remind the Examiner that the language of the references may not be taken out of context and combined them without motivation, in effect producing the words of the claims (and

sometimes, not even the words or concepts of the claims), without their meaning or context. The resultant combination would not yield the invention as claimed.

The claims are rejected under 35 U.S.C. §103(a) and no showing has been made to provide the motivation as to why one of skill in the art would be motivated to make such a combination, and further fails to provide the teachings necessary to fill the gaps in these references in order to yield the invention as claimed. The rejections under 35 U.S.C. §103(a) have provided no more motivation than to simply point out the individual words of the Applicant's claims among the references, but without the reason and result as provided in the Applicant's claims and specification, and without reason as to why and how the references could provide the Applicant's invention as claimed. Hindsight cannot be the basis for motivation, which is not sufficient to meet the burden of sustaining a 35 U.S.C. §103(a) rejection.

Thus, claims 4, 5, 17 and 18 of the present invention are not taught or suggested by Itoh and/or the Prior Art. Combining these references fails to teach or yield the invention as claimed. The combination of these references fails to teach or suggest all the elements of the claims. Further, one of skill in the art would not be motivated to make such a combination. Therefore, the present invention is not obvious in light of any combination of Itoh and/or the Prior Art. Withdrawal of the §103(a) rejection to claims 4, 5, 17 and 18 is therefore respectfully requested.

Regarding claims 10 and 23, the Examiner admitted that the device of Itoh in view of the Prior Art does not specifically mention a housing used to contain optical elements, but argued that it would have been obvious to one of ordinary skill in the art to place optical elements in a housing in view of reducing any dusts or dirt from mounting on the optical elements. The Applicants respectfully disagree with this assessment. Applicant's claim 10, which is dependent upon Applicant's claim 9, is directed toward the step of maintaining one or more of the optical emitters, one or more of the optical receivers, and one or more of the associated optical lens in a

sensor housing. Similarly, Applicant's claim 23, which is dependent upon claim 22, indicates that one or more of the optical emitters, one or more of the optical receivers, and one or more of the associated optical lens are also located in a sensor housing. The use of a housing for reducing any dusts or dirt from mounting on the optical elements is not necessarily the strongest advantage of using such a housing.

Rather, the Applicant's specification at Page 11, lines 20-24, indicates that the emitter/detector and distributed controller are integrated into a single package (i.e. the housing) along with any other desired conveyor control components or elements thereby permitting a significant reduction in the size of the sensor, providing designers greater freedom in sensor location and mounting means. In other words, by using a housing as indicated at Applicant's claims 10 and 23, the size of the resulting sensor can be significantly reduced, which is a major advantage over both Itoh and/or the Prior Art Fig. 3 drawing, neither of which disclose, suggest and/or show a housing, as the Examiner admits. Therefore it would not have been obvious to one of ordinary skill in the art to place optical elements in a housing in view of reducing any dusts or dirt from mounting on the optical elements. The issue of reducing any dust or dirt would not necessarily amount to a much smaller sensor package size, unlike the housing of Applicants' claimed invention.

Regarding claims 11 and 24, the Examiner argued that the limitations therein are shown in FIG. 5 of Itoh. The Applicant respectfully disagrees with this assessment. Applicant's claim 11, which is dependent upon claim 10 wherein the signal conditioning module interfaces with a microprocessor to form a distributed microcontroller, the method further comprising the step of: connecting the plurality of optical sensing components to the distributed controller. Similarly, Applicant's claim 24, which is dependent upon claim 22, indicates wherein the signal conditioning module interfaces with a microprocessor to form a distributed microcontroller, and wherein each of the plurality of emitter-receiver pairs is

connected to the distributed controller. The Applicant note that the Examiner has not successfully identified a distributed controller in Itoh and/or the Prior Art. The Examiner has also not explained how and why Itoh and/or the Prior Art teach a signal conditioning module, a microprocessor, a distributed microcontroller, signal conditioning module interfaces, and emitter-receiver pairs connected to a distributed controller. The Examiner has not identified any portions of Itoh and/or the Prior Art, which teach all such elements and for use in a software controlled optical sensor for conveyors.

Instead, the Examiner has taken the references out of context in an attempt to argue that such the Itoh and Prior Art FIG. 3 drawing references teach all of the elements of Applicant's claims 11 and 24, including all elements such as signal conditioning module, a microprocessor, a distributed microcontroller, signal conditioning module interfaces, emitter-receiver pairs connected to a distributed controller, and the like. The Applicants remind the Examiner that the language of the references may not be taken out of context and combined them without motivation, in effect producing the words of the claims (and sometimes, not even the words or concepts of the claims), without their meaning or context. The resultant combination would not yield the invention as claimed.

The claims are rejected under 35 U.S.C. §103(a) and no showing has been made to provide the motivation as to why one of skill in the art would be motivated to make such a combination, and further fails to provide the teachings necessary to fill the gaps in these references in order to yield the invention as claimed. The rejections under 35 U.S.C. §103(a) have provided no more motivation than to simply point out the individual words of the Applicant's claims among the references, but without the reason and result as provided in the Applicant's claims and specification, and without reason as to why and how the references could provide the Applicant's invention as claimed. Hindsight cannot be the basis for motivation, which is not sufficient to meet the burden of sustaining a 35 U.S.C. §103(a) rejection.

Thus, claims 11 and 24 of the present invention are not taught or suggested by Itoh and/or the Prior Art. Combining these references fails to teach or yield the invention as claimed. The combination of these references fails to teach or suggest all the elements of the claims. Further, one of skill in the art would not be motivated to make such a combination. Therefore, the present invention is not obvious in light of any combination of Itoh and/or the Prior Art. Withdrawal of the §103(a) rejection to claims 11 and 24 is therefore respectfully requested.

Regarding claims 12 and 25, the Examiner admitted that device of Itoh in view of the Prior Art does not specifically mention that an amplifier is used to amplify a signal from an optical receiver, but argued that it would have been obvious to one of ordinary skill in the art to use an amplifier to amplify a signal from an optical receiver in view of improving a signal-to-noise ratio.

The Applicants respectfully disagree with this assessment. Applicants' claim 12, which is dependent upon Applicants' claim 11, is directed toward the step of configuring the distributed controller to comprise electronic circuitry which, for each of the plurality of emitter-receiver pairs, supplies power to one or more of the optical emitters, amplifies a signal output from one or more of the optical receivers, performs required signal conditioning and processing, and provides an interface to a microcontroller. Similarly, Applicant's claim 25, which is dependent upon Applicant's claim 24 is directed toward a distributed controller configured to comprise electronic circuitry which, for each of the plurality of emitter-receiver pairs, supplies power to one or more of the optical emitters, amplifies the signal output from one or more of the optical receivers, while performing both required signal conditioning and processing, and additionally providing an interface to a microcontroller. Applicant notes that claims 12 and 25 have been amended (along with claims 11 and 24) to refer to a distributed microcontroller rather than just a distributed controller in order to provide additional clarification.

Applicant's note that Itoh, on the other hand, either alone or in association with the Prior Art, does not teach, suggest or disclose a distributed microcontroller, wherein the distributed controller performs both signal processing and conditioning, in addition to the amplifier, along with a microcontroller and an interface to the microcontroller. Additionally, Itoh and/or the Prior Art does not teach, suggest or disclose electronically circuitry for each of the plurality of emitter-receiver pairs. All such features not disclosed by Itoh and/or the Prior Art. The distributed controller of the Prior Art does not teach, suggest or show all such claim limitations and features of Applicant's claims 12 and 25.

Applicants note that if the Examiner does not meet all three prongs of the aforementioned test under M.P.E.P. §2143, the rejection to claims 12 and 25 must be withdrawn. Because all such feature are not disclosed by Itoh and/or the Prior Art, and the Examiner has not provided evidence or an explanation showing otherwise, the Applicant believes that the Examiner's argument with respect to claims 12 and 25 fails under the third prong of the aforementioned obviousness test under M.P.E.P. §2143. That is, the Examiner has not established the teaching or suggestion of all the claim limitations of Applicant's claims 12 and 25 by the combination of Itoh and/or the Prior Art.

Additionally, the Applicant submits that the Examiner's argument with respect to claims 12 and 25 fails under the second prong of the aforementioned obviousness test under M.P.E.P. §2143. That is, the Examiner has not explained how a reasonable expectation of success for combining Itoh and/or the Prior Art would result in the claim limitations of Applicant's claims 12 and 25, particularly the formation of a distributed microcontroller formed from the components of Applicant's invention. Applicant notes that Itoh and/or the Prior Art does not teach, mentioned, disclose or even suggest a distributed microcontroller composed of the components of Applicant's invention, including all of the components and features taught by the claims from which claims 12 and 25 depend. Also, the Applicant submits that the Examiner's argument with respect to claims 12 and 25 fails under

the first prong of the aforementioned obviousness test under M.P.E.P. §2143. That is, the Examiner has not provided some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings of Itoh and/or the Prior Art. Applicants note that if the Examiner does not meet all three prongs of the aforementioned test under M.P.E.P. §2143, the rejection to claims 12 and 25 must be withdrawn.

Instead, the Examiner has taken the references out of context in an attempt to argue that such the Itoh and Prior Art FIG. 3 drawing references teach all of the elements of Applicant's claims 12 and 25. The Applicants remind the Examiner that the language of the references may not be taken out of context and combined them without motivation, in effect producing the words of the claims (and sometimes, not even the words or concepts of the claims), without their meaning or context. The resultant combination would not yield the invention as claimed.

The claims are rejected under 35 U.S.C. §103(a) and no showing has been made to provide the motivation as to why one of skill in the art would be motivated to make such a combination, and further fails to provide the teachings necessary to fill the gaps in these references in order to yield the invention as claimed. The rejections under 35 U.S.C. §103(a) have provided no more motivation than to simply point out the individual words of the Applicant's claims among the references, but without the reason and result as provided in the Applicant's claims and specification, and without reason as to why and how the references could provide the Applicant's invention as claimed. Hindsight cannot be the basis for motivation, which is not sufficient to meet the burden of sustaining a 35 U.S.C. §103(a) rejection.

Thus, claims 12 and 25 of the present invention are not taught or suggested by Itoh and/or the Prior Art. Combining these references fails to teach or yield the invention as claimed. The combination of these references fails to teach or suggest

all the elements of the claims. Further, one of skill in the art would not be motivated to make such a combination.

Also, the rejection to claims 12 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Itoh and/or the Prior Art fails under all three prongs of the aforementioned test under M.P.E.P. §2143. Based on the foregoing, the Applicants submit that the aforementioned rejection to claim 12 and 25 under 35 U.S.C. § 103(a) has been traversed. The Applicant therefore requests that the rejection to 12 and 25 under 35 U.S.C. § 103(a) be withdrawn, because the present invention is not obvious in light of any combination of Itoh and/or the Prior Art.

VI. Conclusion

The Applicants have amended the claims to more particularly disclose the invention claimed thereof. It is believed that such amendments do not constitute new matter, but are rather clarifying in nature. Additionally, it is believed that support for such amendments is provided within the specification, including the drawings, and that the specification adequately enables such amendments. In view of the foregoing discussion, the Applicants have responded to each and every rejection of the Official Action, and respectfully request that a timely Notice of Allowance be issued.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned representative to conduct an interview in an effort to expedite prosecution in connection with the present application. If a telephone conference would be of assistance in advancing the prosecution of this application, the Examiner is invited to call the Applicants' attorney at the below-indicated telephone number.

Respectfully submitted,

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